

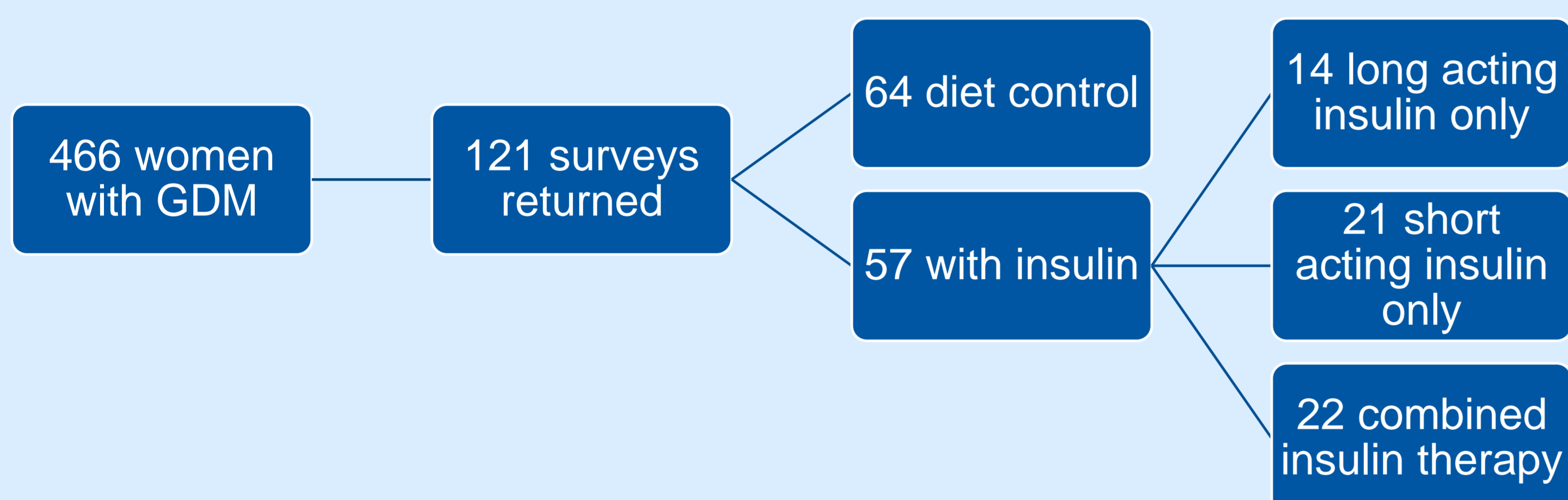


## Objective

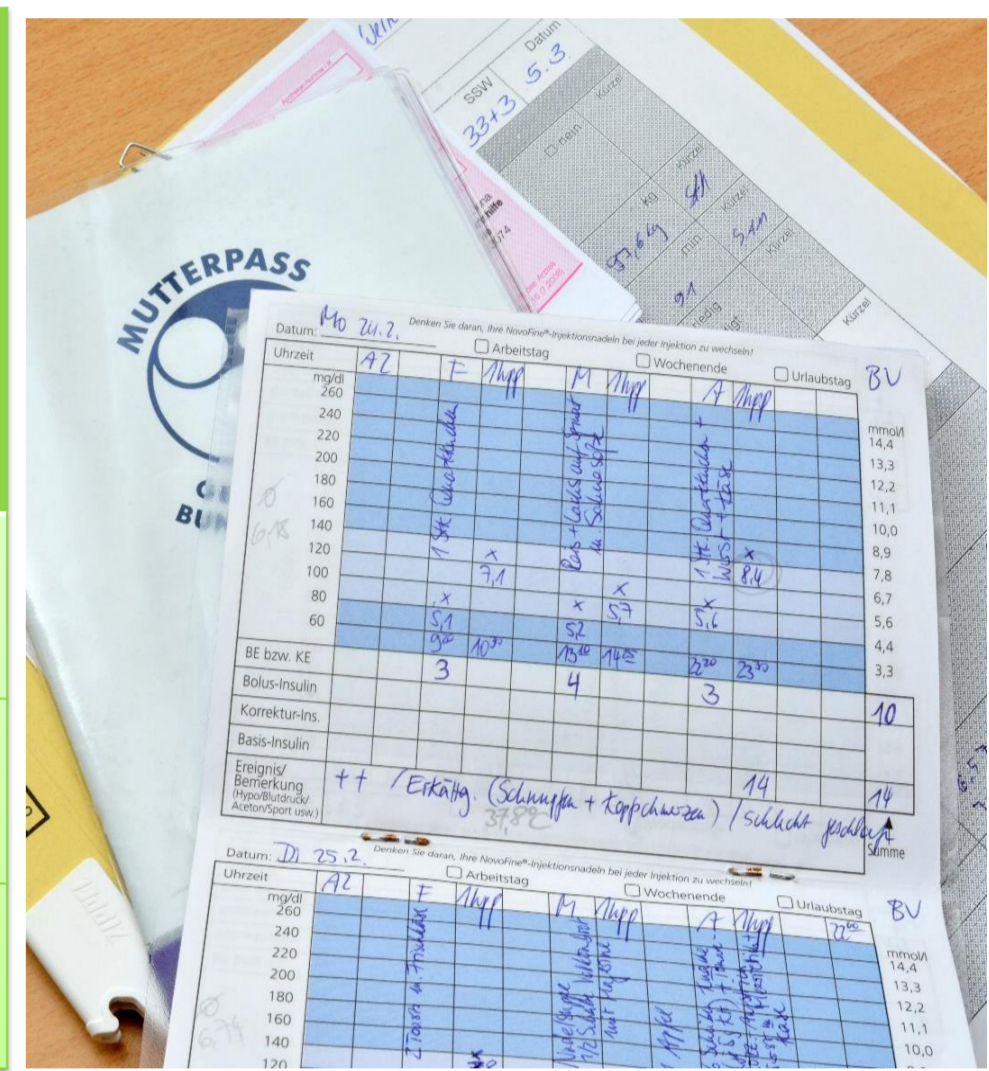
- ❖ Increasing evidence supports a role for the circadian rhythm in the development of metabolic disease.
- ❖ In pregnant women with gestational diabetes (GDM) an increasing number with isolated nocturnal insulin resistance is presented; requiring therapy with long acting insulin, partly even without the need of short acting insulin.
- ❖ Here we attempt to relate data on circadian rhythm to the insulin therapy during pregnancy.

## Methods

- ❖ Surveys were mailed to 466 patients with GDM seen in our outpatient department between 2012 und 2014
- ❖ Questionnaires about: life style, sleep habits, family status, employment status and profession, working hours, satisfaction with work, overtime working, regular meals, shift-working, sleeping disorders, stress, physical exercise and health status.



Patients treated with long acting insulin only	
2012	10,2 %
2013	18,7 %
2014	33,3 %



Nightshift	Yes	No
Short acting insulin or both	4 (9,8%)	37 (90,2%)
Long acting insulin only	4 (30,8%)	9 (69,2%)
All	8 (14,8%)	46 (85,2%)
p = 0.08		

## Results

- ❖ 2012 10.2%, 2013 18.7% and 2014 33.3% of 466 patients with GDM were treated with long acting insulin only
- ❖ 121 women replied to the survey (26%) so far
- ❖ 57 (47,1%) were treated with insulin, 64 (52,9%) with diet only
- ❖ Patients receiving insulin therapy were more likely to live with children (insulin 56,1% vs. diet 43,9% p=0,02) compared to dietary treated patients
- ❖ Other differences (insulin vs diet) were only found for weight gain (p=0.011), family status (p=0.02) and subjective health status (p=0.01)
- ❖ Women receiving long acting insulin only - tend to be more often in jobs requiring night shifts (30,8% vs. 9,8%, p=0,08)



Living with Children	Yes	No
Diet only	29 (43,9)	35 (63,6%)
Insulin treated	37 (56,1%)	20 (36,4%)
p = 0.02		

## Conclusion

- Environmental factors affecting the circadian rhythm, including nightwork, shift work and children, influence insulin resistance in GDM patients.
- These should be considered as risk factors for impaired glucose control.
- The measurement of fasting glucose might be a mandatory extension of GDM screening if the evaluated risk factors are present.

